

## H. E. BROWN AND THE PLANTS OF THE "NORTH SIDE OF MOUNT SHASTA"

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A number of herbarium sheets in a dozen or more herbaria carry labels printed in blue ink with the legend that the specimens were collected by H. E. Brown on the "North Side of Mount Shasta, Siskiyou County, California". An effort has been made to determine the source of these specimens and the accuracy of the citation.

At first, I was interested in confirming the occurrence of a few more or less commonly cited or obvious records. The work was broadened to discover the extent to which such labeling occurred among the materials Brown collected. In Cooke (1941) I quoted from a letter received from A. A. Heller shortly before his death to the effect that Brown's collections in the area were lumped under Mount Shasta although quite a bit of the collecting was done on Mt. Eddy.

In the files of the library of the New York Botanical Garden is a "List of H. E. Brown's California Plants". Centered above the title on the first of four sheets is the legend "No. 1", possibly in H. E. Brown's handwriting. The list includes 530 species, although the highest number found on one of his labels is 917. According to Lanjouw and Stafleu (1954), Brown collected in "Pacific North America (Chiefly California)". They list eleven herbaria in which Brown collections may be found with the notation that 732 specimens are at NY and 807 are at US. Other herbaria listed include: B, BRSL, E, F, L, MANCH, MIN, MO, and P. A few records are reported to be in the Jepson Herbarium (Bacigalupi, letter), and the California Academy of Science (Howell, 1950). One specimen has been found in the Herbarium of the University of California, Berkeley. Cantelow and Cantelow (1957) gave a brief summary of Brown's activities based largely on my comments (Cooke, 1941).

The list mentioned above is without system, either taxonomic, geographic, or numeric. In a search for herbarium records of these plants, before the list became available, a few sheets were found in the New York Botanical Garden Herbarium. The results of this search were listed in 1941. When the Brown catalogue became available, certain obvious or familiar species were searched for at NY. It was soon apparent that before a useful search could be made the list should be rearranged following the system used in the herbarium in which the specimens were filed. An opportunity to search for additional records was found in December, 1969. At that time, 122 numbers of 118 species representing 73 genera of as many species of Mount Shasta plants were found. This represents records in 23 families, and 22 percent of the entire list. Of these records, 60 percent are from eight locations or dates on Mt. Shasta, 40

percent from several locations in four other California counties, and from several Oregon locations.

At the time of Brown's activities, the north side of the mountain was not as accessible as now. The railroad had not been completed, but the Military Pass road might have been available for foot or even wagon traffic. Assuming that Brown could have reached the base of the north side of the mountain at as low an elevation as 5,000 feet, he would have found a rather dry mountain. At present, if there is surface water from springs, the springs are on the steep walls of Whitney Creek and Bolam Creek canyons whose walls are formed largely of volcanic ash, outcroppings of lava flows, and lava dikes. There are no meadows in the sense of the heather meadows along Squaw Valley Creek and Panther Creek on the south side of the mountain. No wet-meadow type habitats have been observed on several trips to timberline in the Bolam area, on trips to the lava parks above Hotlum, or on trips into the Shasta red fir forest above Andesite.

Brown's Mt. Shasta records are found over at least eight labels. These may be divided into two major groups: "north side" and "south side". Each of the four "north side" labels carries the location: "California Plants Collected North Side Mt. Shasta, Siskiyou Co., by H. E. Brown." They vary as to altitude and date as follows: 1. "Altitude 5000-9000 feet. June 11-16, 1897;" 2. "Altitude 5000-10,000 feet. June 15-30, 1897;" 3. "Altitude 5000-9000 feet. July 1-15, 1897;" and 4. "Altitude 5000-10,000 feet. July 15-31, 1897."

The distribution of habitats in the region today strongly indicates that all species distributed with these labels were collected on the west side of the Sacramento Valley on the east slopes of Mt. Eddy and possibly adjacent mountains and ridges as far south as Castle Lake.

The remaining group of four labels is said to cover plants collected in the vicinity of Mount Shasta. These include: 1. "California Plants Collected near Mt. Shasta, Siskiyou Co. by H. E. Brown. Altitude 6000-7000 feet. June 1-15, 1897." 2. "California Plants Collected Near Sisson, Siskiyou Co. by H. E. Brown. Altitude 3555 feet. June 1-10, 1897." 3. "California Plants, Collected South Side of Mount Shasta, Siskiyou Co., by H. E. Brown. Altitude 5000-10,000 feet. July 1-15, 1897." 4. Same as (3) but dated: "July 15-31, 1897."

Probably it is no longer possible to determine the extent of Brown's travels in the Mt. Shasta area. It has been suggested that he worked in a store in Sisson (now the city of Mount Shasta). A few of the plants with these labels can be found today on the lower slopes of Mt. Shasta and in Strawberry Valley, the general area dominated by the community that used to be known as Sisson. However, most of the plants mounted over these labels occur in the lower valleys of the headwaters region of the Sacramento River and on the eastern slopes of the adjacent mountains of the Klamath Mountains such as Mt. Eddy and the ridges south to Castle Lake.

On the basis of lists obtained from specimens seen at NY, of the Heller letter cited above, and of my collecting trips on Mt. Shasta and observations in the Klamath Province, it is suggested that: 1. Brown never visited the "North Side of Mt. Shasta". The plants so labeled were probably collected in the Wagon Creek drainage of the east side of Mt. Eddy, directly across the valley and west of Mt. Shasta. 2. Some of the plants labeled as collected between 6000–7000 feet "near Mount Shasta" may have been collected on Mt. Shasta, but were probably collected on Mt. Eddy, especially if the altitude is cited correctly. 3. Of the plants collected "near Sisson", most were probably collected on the west side of the Upper Sacramento and Wagon Creek valleys. 4. Of the plants collected "south side of Mt. Shasta", some could have been collected between Sisson (now the city of Mount Shasta) and Wagon Camp, the location the Merriam Expedition chose as a base during the period from July 15 to Oct. 1 in the following year (1898). However, many of the species on Brown's list have not been seen in the area since Brown is supposed to have made his collections. Miss Wilkins and the botanical collectors of the Merriam Expedition made a very thorough survey of the species found in the area in which the expedition was based (Wagon Camp is at 5700 feet), that is, Wagon Camp and related areas.

On the basis of the information presented here, it is suggested than monographers be exceedingly careful about the citation of a plant collected by H. E. Brown "on Mount Shasta". It is entirely possible that the specimen was collected elsewhere. This could have been in the neighboring mountains, especially in the Wagon Creek drainage on Mount Eddy.

#### LITERATURE CITED

- BROWN, H. E., undated. List of H. E. Brown's California plants. Privately printed, filed in the library of the New York Botanical Garden.
- CANTELOW, E. D. and H. C. CANTELOW, 1957. Biographical notes on persons in whose honor Miss Eastwood named plants. *Leafl. West. Bot.* 8:83–101.
- COOKE, W. B., 1941. First supplement to the flora of Mount Shasta. *Amer. Midl. Nat.* 26(1):74–84.
- HOWELL, J. T., 1950. Plant types in the herbarium of the California Academy of Sciences. *V. Wassmann Jour. of Biol.* 8:251–254.
- LANJOUW, J. and F. A. STAFLEU, 1954. *Index herbariorum. Part II. Collectors.* First installment A-D. *Regnum Vegetabile* 2:1–174.
- MERRIAM, C. H., 1899. Results of a biological survey of Mount Shasta, California. *North American Fauna* 16:1–179.

#### NOTES AND NEWS

AVAILABILITY OF BAKER'S LIST OF SEED PLANTS.—Milo S. Baker's "A Partial List of Seed Plants of the North Coast Ranges of California" has been re-issued and is available by mail (\$2.44 including tax and mailing charge) from either the Santa Rosa Junior College Bookstore, 1501 Mendocino Avenue, Santa Rosa, California 95401, or the Sonoma State College Bookstore, 1801 East Cotati Avenue, Rohnert Park, California 94928.